

Amendments to the Claims:

Claims 65-75 are unchanged. Claims 76 and 77 are amended as below:

Claim 76 (currently amended)

A fluid machine comprising:

a housing defining a generally spherical interior, said housing having a fluid inlet and a fluid outlet in communication with the interior of said housing;

a primary vane disposed within the interior of said housing;

a rotary shaft having a primary axis of rotation mounted to said housing, said primary vane being coupled to said rotary shaft so that said primary vane is rotated about said primary axis by said rotary shaft;

a fixed shaft which extends into said interior of said housing opposite said rotary shaft, said fixed shaft having a spherical end portion about which said primary vane rotates;

said fixed shaft being adjustably mounted to said housing so that said fixed shaft can be rotated into various fixed positions;

a carrier ring rotatably carried on said spherical end portion of said fixed shaft, the axis of rotation of said carrier ring being oriented at an oblique angle in relation to said primary axis;

a secondary vane pivotally mounted about an axis perpendicular to said primary axis to allow said secondary vane to pivot between open and closed positions with respect to said primary vane as the primary and secondary vanes are rotated together by said rotary shaft about said primary axis, said primary and secondary vanes dividing said interior of said housing into chambers with the volume of said chambers varying as said secondary vane is moved between the open and closed positions, said secondary vane also being pivotally coupled to said carrier ring so that said secondary vane is pivotal about an axis perpendicular to said carrier ring's axis of rotation, the rotation of said carrier ring causing said secondary vane to reciprocate between the open and closed positions as said secondary vane is rotated about said primary axis by said rotary shaft;

wherein said primary vane is formed and connected as two halves each having a flat inner surface that abuts sealingly against the inner surface of the other half and are joined at opposite ends to define a central circular opening.

Claim 77 (currently amended)

A fluid machine comprising:

a housing defining a generally spherical interior, said housing having a fluid inlet and a fluid outlet in communication with the interior of said housing;

a primary vane disposed within the interior of said housing;

a rotary shaft having a primary axis of rotation mounted to said housing, said primary vane being coupled to said rotary shaft so that said primary vane is rotated about said primary axis by said rotary shaft;

a fixed shaft which extends into said interior of said housing opposite said rotary shaft, said fixed shaft having a spherical end portion about which said primary vane rotates;

said fixed shaft being adjustably mounted to said housing so that said fixed shaft can be rotated into various fixed positions;

a carrier ring rotatably carried on said spherical end portion of said fixed shaft, the axis of rotation of said carrier ring being oriented at an oblique angle in relation to said primary axis;

a secondary vane pivotally mounted about an axis perpendicular to said primary axis to allow said secondary vane to pivot between open and closed positions with respect to said primary vane as the primary and secondary vanes are rotated together by said rotary shaft about said primary axis, said primary and secondary vanes dividing said interior of said housing into chambers with the volume of said chambers varying as said secondary vane is moved between the open and closed positions, said secondary vane also being pivotally coupled to said carrier ring so that said secondary vane is pivotal about an axis perpendicular to said carrier ring's axis of rotation, the rotation of said carrier ring causing said secondary vane to reciprocate between the open and closed positions as said secondary vane is rotated about said primary axis by said rotary shaft;

wherein said secondary vane is formed and connected as two halves each having a flat inner surface that abuts sealingly against the inner surface of the other half and are joined at opposite ends to define a central circular opening.